DOCUMENT RESUME

ED 106 819 CS 001 871

TITLE	PRIMIR (Primary Individualized Reading).
INSTITUTION	Seattle School District 1, Wash.
PUB DATE	75
NOTE	50p.; See CS001934 for "Effective Reading Programs: Summaries of 222 Selected Programs"
EDRS PRICE	MF-$0.76 HC-$1.95 PLUS POSTAGE
DESCRIPTORS	Developmental Reading; *Effective Teaching; Elementary Education; *Individualized Reading; Primary Education; *Reading Instruction; *Reading Programs
IDENTIFIERS	*Effective Reading Programs; Right to Read

ABSTRACT

This program, included in "Effective Reading Programs...," is designed to minimize the rigidities of the typical basal, three-group plan for teaching primary-level reading. The program serves over 4600 students in grades one through three throughout the Seattle School District. The students come from both inner-city and residential areas of the city and represent a wide range of income levels. The program uses almost any selected basal reading series for a skills-building strand only, and it focuses on self-selection of reading materials by the students. Each classroom has a reading center stocked with paperbacks, comic books, magazines, and other reading materials appropriate for primary-level children. Classroom procedures include total group work for introducing new skills; small- or basal-group work for reviewing, extending, or enriching skills and concepts; use of the grapheneme for teaching decoding skills and code-breaking routines; self-selection of materials for practice; use of reading stations; student goal-setting; and individualized prescriptions based on continuous measurement. Teachers are trained to implement the program and receive about 30 hours of inservice training covering program setup and operation. (WR/AIk)

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ED106819

A STUDY OF THE PRIMARY INDIVIDUALIZED READING PROGRAM (PRIMIR) INCLUDING AN EVALUATION OF THE DIVIDED DAY SCHEDULE

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1975

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During the 1972-73 school year 4,355 first, second, and third grade children were subjects of a massive research/evaluation study to determine the significance of the Primary Individualized Reading Program, hereafter referred to as PRIMIR. The study included a second major variable, a divided day schedule hereafter referred to as D/D.

The PRIMIR program was designed to minimize the rigidities of the typical basal-three group plan for teaching reading to primary children. It included self-selection of reading materials; one-to-one conferencing with the teacher; use of a basal series as a skills building strand; use of the graphoneme for teaching phonics; basal group work for reviewing, extending, or enriching skills and concepts; and total group presentations for introducing new and decoding skills. Each PRIMIR classroom contained a mini-reading center stocked with paperback books, comic books, magazines and other reading materials appropriate for primary children. Teachers were trained specifically for the PRIMIR approach in management and teaching techniques.

The divided day was utilized whenever possible as a scheduling device to provide for smaller class sizes at the beginning and close of the day. One-half of pupils arrived at school the first hour and participated in a reading session. At the end of the day, the early arrivers went home and the late arrivers stayed for a reading session. The teacher never had more than one-half of the class for a PRIMIR session.

Experimental subjects were all those children enrolled in the PRIMIR program. There were two experimental groups PRIMIR D/D and EX/PRIMIR D/D,

EX/PRIMIR consisted of four PRIMIR schools with an In-Building Consultant on site full time. Control groups were primary classes not utilizing PRIMIR. Two such control groups were established, traditional D/D and traditional non D/D, subsequently referred to as Non-PRIMIR D/D and Non-PRIMIR. Traditional control classes worked within a single session, generally in the first ninety minutes in the a.m. Teachers followed a basal series for scope, sequence, and teaching techniques as suggested in the teacher's manual. Supplementary materials and activities were used as deemed necessary by the teacher and as directed by the manual.

While several varieties of basal reading materials were available to both the PRIMIR and the traditional teachers, the most often used series was the Lippincott Basic Reading Program.

Because reading tests for primary children at a given grade level were not powerful enough to be used for both pretest and posttest scores, a design was established which used the reading pretest as a covariate, and the reading posttest was used as the criterion measure. The pretests and the posttests were not the same test for first and second grades though both were standardized.

In October of 1972 pretesting was accomplished and in April of 1973 posttesting was completed. Analysis of the testing indicated that for first grades significance at the .01 and the .05 level was achieved for both boys and girls in word reading, word analysis, reading, and total reading. For grades two and three the same situation occurred with one exception. Third grade control vs. experimental differences were non-significant in vocabulary although the PRIMIR group scored higher than the traditional group.

Analysis of subgroups and schedules revealed some deviations from the total group evaluation, but the conclusion was drawn that given similar circumstances, the PRIMIR program and particularly the PRIMIR D/D, including EX/PRIMIR D/D, was significantly superior to the control or the Non-PRIMIR and Non-PRIMIR D/D reading program.

A STUDY OF THE PRIMARY INDIVIDUALIZED READING
PROGRAM (PRIMIR) INCLUDING
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The words individualized reading have come to mean anything from letting each child have two basal readers in his or her desk to letting each child do their "own thing." Since the publication of Jeannette Veatch's book on individualizing the reading program, there have been many attempts and many claims surrounding the desire to make reading programs more palatable to children and at the same time increase its effectiveness.[1] Unfortunately, there is more rhetoric than reality in literature, and published, valid research covering the topic is skimpy at best.[2, 3]

Nevertheless, there is enough evidence to indicate that individualizing the reading program is desirable and beneficial in terms of improving reading achievement and attitudes.[4,5,6] It was with this in mind that the primary individualized reading program (PRIMIR) was conceived, implemented, and researched.

RESEARCH DESIGN:

Four groups were established from within the total primary population of the Seattle Public School District #1. These groups were designated as primary divided day (PRIMIR D/D), exemplary primary divided day (EX/PRIMIR D/D), traditional primary divided day (NON-PRIMIR D/D), and traditional primary (NON-PRIMIR). The PRIMIR D/D and EX/PRIMIR D/D were considered experimentals while the NON-PRIMIR D/D and NON-PRIMIR were considered controls. Subjects in the experimental classes were all the children enrolled in the PRIMIR divided day classes. As nearly as was possible the control classes were selected to match experimental classes on the basis of geographic, socio-economic, and ethnic mix.

Table 1 indicates the numerical breakdown of children in each grade by sex and subgroup.

TABLE 1

Numbers of children by sex, grade, and subgroup.

Grade	Sex	Experimental		Control	
		EX/PRIMIR D/D	PRIMIR D/D	NON-PRIMIR D/D	NON-PRIMIR
1	boy	97	285	203	228
	girl	78	287	165	251
	total	175	585	368	479
2	boy	102	307	159	209
	girl	104	327	157	214
	total	206	634	316	423
3	boy	67	272	102	142
	girl	74	276	112	134
	total	141	548	214	276

For each grade and sex subgroup, eight comparisons were run as follows:

1. Total Experimental vs. Total Control
2. EX/PRIMIR D/D vs. Control
3. EX PRIMIR D/D vs. PRIMIR D/D
4. PRIMIR D/D vs. Control
5. EX/PRIMIR D/D vs. NON-PRIMIR D/D
6. EX/PRIMIR vs. NON-PRIMIR
7. PRIMIR D/D vs. NON-PRIMIR D/D
8. PRIMIR D/D vs. NON-PRIMIR

Both the experimental and control subjects were tested in October of 1972 and posttested in April of 1973.

Acquiring appropriate tests for primary children presented unique problems. Tests designed to be given at the beginning of first and second grades were not powerful enough to be given at the end of those grades in order to obtain a mean gain score. Because of this problem it was decided to pretest with

with a suitable reading test and to choose a more powerful test for the posttest. The pretest was used as a basis for equating the groups on entry achievement scores. Full test titles are listed in the bibliography. Table 2 lists the tests selected and the date of administration.

TABLE 2 TEST SCHEDULE[7,8,9]

Grade	Date of Test	
	October	April
1.	Clymer-Barrett	MAT Primary I
2.	MAT Primary I	CAT Level II
3.	MAT Primary II	CAT Level II

Using the pretest scores for each of the eight comparisons listed above a t-test was performed to determine whether the groups differed significantly in entering reading achievement. If a significant difference was found, an analysis of covariance was performed on the posttest score using the pretest scores as the controlling factor. If no significant differences were found, a simple analysis of variance was run on the posttest scores.

Each analysis within the eight comparisons was made on the Word Knowledge, Word Analysis, Reading, and Total Reading subtests of the MAT for first grades; and on the Vocabulary, Comprehension, and Total Reading subtests of the CAT. A total of 312 analyses of variance or covariance were completed.

CONTROL OF VARIABLES:

Controlling the techniques, methods, and content of the experimental groups proved to be relatively easy. All teachers had been trained by the experimentor and all materials were supplied on a uniform basis. All experimental teachers were visited several times during the year by the experimentor and a PRIMIR specialist who was experienced in the operation of the PRIMIR program. Most of the teachers in the PRIMIR program had volunteered for the program and were eager to make it work.

Maintaining continuity in the control classes proved more difficult. While most of the control classes were using similar reading materials, there was some variation both in content and style of presentation. Some were very much tied to a basal program with extensive use of workbooks while others tended to use the library more freely. Nevertheless, since the Lippincott Basic Reading Program was the dominant series for both experimental and control groups, the scope, sequence, and general goals were essentially equal between both groups. The experimentor and the PRIMIR specialist visited the control classrooms as often as possible but not to the extent that the PRIMIR classes were visited. Subjectively, while the PRIMIR teachers may have been more enthusiastic little differences were detected in ability between the control teachers and the experimental teachers; i.e., teachers in both groups appeared to be equally competent.

It was felt the Hawthorne effect was reasonably accounted for by running the program for one full school year. It would be quite difficult to maintain a halo effect over such a long period of time.

DESCRIPTION OF GROUPS PRIMIR:

The PRIMIR program is as much of a management routine as it is a teaching strategy. Because the PRIMIR approach utilized so many varied materials and techniques, it required a well organized and trained manager. Within each reading session the teacher utilized and taught a total group lesson, a basal group lesson, conferenced several children, provided for a self-selection process, assigned stations, and kept records. All of these tasks became a daily routine yet a visitor to the well operated classroom once remarked, "I know it's organized but it seems so easy."

As a starting point it may be well to define individualized reading as it related to PRIMIR. For PRIMIR a finite definition was not essential but within that definition two concepts were basic. The first was that individualized

reading implied a one-to-one relationship between the teacher and the student and the second was that there was almost complete self-selection of reading material by the student. For primary children the former concept was easily attainable, but the second required some control in the initial stages.

The approach was to saturate the child's environment with things that stimulated reading, paperback books, magazines, comic books, newspapers, and self-authored writings. The teacher served more in the role of a reading counselor than a dispenser of phonics and ditto sheets.

Each PRIMIR classroom was set up with a mini-reading center in one corner somewhat shielded with bookcases, panels, or half walls. Within that mini-center were located all kinds of reading materials displayed on wire or wooden racks. Non school type furniture was included, a couch, a soft chair, a throw rug, pillows. This was the area where children self-selected books to read during self-selection time or during uninterrupted sustained silent reading time. Around the room were the stations. In an unobtrusive place there might have been a small table containing a tape recorder or a typewriter. There was always a reading games table and usually a table with self-help materials for prescriptive work.

If the PRIMIR class was on the divided day schedule the teacher greeted only half of the class during the reading session. Children frequently moved directly into a USSR session which meant that they selected a book and read silently until an alarm rang, preset by the teacher. Next the teacher may have decided to move into the total group lesson.

The total group lesson was the time when new ideas, concepts, skills, and decoding generalizations were presented to the entire group. Teaching was aimed at the top reader or group. This technique was based on the premise that the fast reader would need only one presentation while others would be exposed again in another session at another time. All presentations in the total group were made in a lively, even noisy fashion, involving the children in a physical way as much as was possible.[10]

The basal group was a non static grouping of children assembled for extens enrichment, or remedial work. A basal reader was used as a skills building strand but did not constitute the major source of reading materials. Children were assigned to the basal group on the basis of immediate need and not because of a reading score attained on a standard test. For example, if three or four children had difficulty comprehending, they might have been assigned to a basal group for a short time until the problem was resolved to the satisfaction of the teacher. The rule was that no child was ever assigned to a basal group on a permanent basis.

There were two activities that occurred simultaneously. One was the conference and the other was self-selection. While the teacher was conferencing one child or working in a basal group with several, the remainder of the class was self-selecting or completing a prescribed assignment. Either the self-selecting or the prescribed activity took place within the reading center or at one of the stations. A record was kept of the different activities each day.

PRIMIR teachers were trained in techniques of conferencing using Barrett's Taxonomy of Comprehension Levels as a basis for asking questions.[11] The conference had two aims. The first was to determine the basic reading skill of the child, and the second was to determine the child's emotional response to the material read; i.e., the comprehension level. Approximately three to four children had to be conferenced each session. Assuming no more than fifteen in each session, a.m. or p.m., each child was conferenced no less than once a week and perhaps more often.

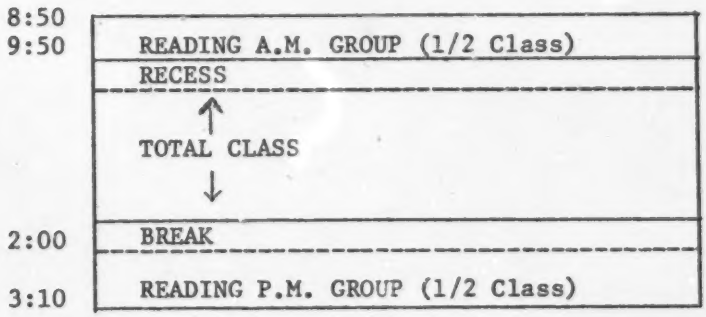
At least two other elements are worthy of mentioning. First was the use of the graphoneme as the basic phonic unit. The graphoneme is defined as a closed syllable, a combination of letters that begins with a vowel and ends with a consonant.[12] The use of the graphoneme eleiminated the need to teach phonic rules, and it also eliminated the use of letters in isolation. Special techqniques were utilized in teaching the graphoneme in the total and basal groups.

Record keeping was the second element that was of more than passing interest. In an individualized program record keeping is vital. Each PRIMIR teacher was trained in the process of careful record keeping including setting goals, informal diagnosis and prescription.

A more detailed profile of the PRIMIR program is included in the book by Davis.[10]

One other factor or variable figured prominently in the PRIMIR D/D program. The divided day schedule was devised to allow fewer children more time with the teacher during the reading period. The divided day consisted of a mechanical juggling of the daily schedule and nothing more. It may be used with or without curriculum change, and where it has been instituted without program changes, reading achievement scores have always been enhanced. In effect, it appeared that the divided day routine was a strong factor in the superiority of the PRIMIR reading program.

Schematically the divided day schedule can be shown as follows:



The first group or one-half of the class arrived at 8:50 and received a reading lesson until 9:50 when they went to recess and the remainder of the class arrived. The entire group stayed until 2:00 p.m. when the early arrivers went home and the late arrivers remained for their reading lesson until 3:10 or so.

The divided day, in addition to allowing for smaller reading groups, minimized the need for homogeneous grouping and allowed the teachers more time with each child regardless of ability.

All PRIMIR D/D, EXPRIMIR D/D, and NON-PRIMIR D/D groups or classes were on this schedule.

EXEMPLARY PRIMIR D/D:

The Exemplary PRIMIR D/D program was identical to the PRIMIR D/D except that an In-Building Basic Skills Consultant was on site to shepherd the entire Basic Skills program into a cohesive whole. The PRIMIR program was only one element of a total basic skills package for the EX/PRIMIR group.

NON-PRIMIR D/D:

Several of the so-called traditional teachers taught in schools that were on the divided day schedule, but the teachers continued to use the basal reader as a total reading program. The usual process was to group the children in two or more static groups, regardless of session and to follow the procedures outlined in the teacher's manual rather strictly. The NON-PRIMIR D/D was a replica of the NON-PRIMIR program except it was done with fewer children in each reading session.

NON-PRIMIR:

There is little that can be said about a traditional approach to teaching primary children to read. The process is familiar to most schools and most educators in this country.[13] Children were generally grouped on the basis of achievement, either by test or teacher judgment or both, and were delegated to that group for the better part of their school career. The usual routine was to present new vocabulary words, motivate the story, read silently, read aloud, discuss the story, work in the workbook or on a teacher made ditto. In most NON-PRIMIR classrooms children were permitted to journey to the library

before school, during lunch time, after school or during the regularly scheduled weekly visit. All too often this constituted the only practice reading outside the basal reader.

This generally describes the routine for the NON-PRIMIR classes in Seattle and while the description may be shorting the traditional program, the situation can hardly be called flexible or individualized by any standards. This kind of program constituted the controls against which PRIMIR was compared.

HYPOTHESES:

Hypotheses were stated in null form as an aid to determine the degree of significance attained for each assumption.

The overall hypothesis was stated as follows:
Subjects enrolled in the PRIMIR prorgam will not score significantly better on a standardized reading achievement test than will subjects enrolled in a NON-PRIMIR program.

Sub-hypotheses were stated as follows:

1. There will be no significant differences in reading achievement scores between control and experimental subjects based on sex, grade and schedule.
2. There will be no significant differences in reading achievement scores between subjects enrolled in an exemplary PRIMIR program and those enrolled in PRIMIR only, NON-PRIMIR only, or NON-PRIMIR D/D only, based on sex and grade.
3. There will be no significant differences in reading achievement scores for subjects enrolled in either experimental or control groups using the divided day schedule based on sex and grade.

FINDINGS:

The decision statistic was set at the .05($p;f \leq .05$) level based on the F score obtained by the analysis of variance or covariance as noted in the tables.

When total experimental was compared with total control, the experimental group for grade one scored significantly higher on the criterion test than did the control groups. Table 3 lists the results by sex and subgroup for grade one. In all subtests on the MAT, both experimental boys and girls evidenced superior reading achievement over control boys and girls.

For grades two and three, when total experimental groups were compared with total control groups, and with the exception of no significant differences of grade three on vocabulary, the experimentals again scored significantly higher than the controls on subtests of the CAT. Table 11 lists the scores by grade and group.

When experimental boys were compared with control boys in grades two and three the experimentals again prevailed, although the levels of confidence were not always significant. The results recorded on Table 19 reveal that experimentals were significantly superior in vocabulary and total reading on the criterion test, but third grade experimental boys were not significantly higher than controls even though the scores favored experimental boys.

Table 27 contains the analysis figures for all experimental girls compared to all control girls. In all but one subtest score for the third grade girls, the experimentals were significantly superior in reading achievement.

As indicated on Table 5 the first grade EX/PRIMIR D/D and the PRIMIR D/D groups evidenced no great differences,which might have been expected since both were set up almost identically.

On Tables 6 through 10 the comparison of the various grade one groupings with each other indicates that while the EX/PRIMIR DD and the PRIMIR D/D consistently outscored either of the control groups, significance was not consistent. Further, girls evidenced some advantage over boys, and on Table 10 the PRIMIR D/D was significantly superior on all tests for both boys and girls over the NON-PRIMIR groups.

In general, the differences between EX/PRIMIR D/D and PRIMIR D/D for grades two and three were consistent with those in grade one. Differences were not significant, which as noted for grade one was expected. In Tables 14 through 18 comparisons between the various experimental and control groups, while favoring the experimentals, were not consistently significant in favor of one over the other.

When grade two experimental boys were compared to grade two control boys, significance was achieved by grade two boys in vocabulary and total reading, but the differences in comprehension were non-significant. Grade three experimentals were not significantly better than the controls on any of the three sub tests. On Tables 20 through 26 recorded data indicates that the comparison of the various subgroups followed the same general patterns as for the total groups. The second grade experimentals enjoyed a slight advantage over the controls, but the same did not hold for third grade experimentals. Over all the experimentals outscored the controls but not significantly so.

A comparison of girls recorded on Table 27, indicated that for total groups, experimental second grades were significantly superior to control third grade girls in comprehension and total reading. For third graders there were no significant differences in vocabulary although the experimentals scored better than the controls.

In breaking down the various groups in Tables 28 through 34, a pattern similar to that for the boys in grades two and three emerges. While the experimentals were consistently out scoring the controls, significance was spotty for both second grade and third grade experimentals.

DISCUSSION OF THE FINDINGS:

In general, the total experimental groups enjoyed significant differences in reading achievement scores over the total control groups, and while the

EX/PRIMIR D/D and PRIMIR D/D groups outscored either of the NON-PRIMIR D/D or the NON-PRIMIR, the differences were not consistently significant.

First and second grade experimental groups appeared to confirm the fact that PRIMIR with D/D was a superior method to the controls, but for the third grades it appeared that other factors might be working as well. One interesting finding was that the NON-PRIMIR D/D was superior to the NON-PRIMIR and significantly so in most cases. Obviously the divided day schedule offers something to even a traditional program.

In summary, PRIMIR D/D groups were significantly superior in grade one. Divided day groups including PRIMIR D/D were superior in grade two, and additional factors or variables seemed to be important in grade three. Table 35 is a graphic representation of these findings.

In Table 35 only the significant differences are noted. Recall that in most comparisons the experimentals were superior to the controls but in many cases not significantly so. It is important to record that in no cases were the control groups superior to the experimental groups.

An additional finding of some note was that the EX/PRIMIR D/D and PRIMIR D/D was superior to NON-PRIMIR D/D which was superior to NON-PRIMIR. In effect it appears that PRIMIR with divided day offered advantages over either of the traditional classes whether they were on divided day or not. The divided day variable was a strong factor, with all programs on divided day scoring better than the classes not on divided day.

It was also gratifying to note that in cases where significance was achieved experimental boys were among the high scorers. Since this was a consistent factor, the PRIMIR with D/D provided a modest haven for boys not available in the more traditional programs. This finding is a replicate of an earlier study of PRIMIR results, and if the results continue to be valid, the PRIMIR D/D program may offer a partial solution to the failure syndrome which is attributed to boys in this country.[15]

While PRIMIR D/D was the major variable that was tested, the program contained so many variables that it is impossible to attribute the success of the program to specific factors. Obviously the combination of all factors or variables made for a strong and viable program, but it would be interesting and perhaps important to know which factor contributed the most. Until such time that a study can be designed to separate the contribution of the variables, there is only one decision that can be made when searching for a different approach to teaching reading. PRIMIR is certainly a program to be looked at as a very significant alternative.

One finding that warrants some discussion is the non significant levels under vocabulary in the second and third grade comparisons. Table 35 does not list one significant comparison in this subtest. Obviously other factors were operating which precluded significant achievement gains at the third grade level. It is not wise nor appropriate to speculate upon the factors or variables which were operating except to note that part of the problem may be involved with the strength of the test instrument. Since most standardized tests are designed to test more traditional reading programs the PRIMIR operation at the third grade level may be at a disadvantage. For example, the third grade standardized tests rely heavily upon a phonics evaluation and a vocabulary recognition task with words in isolation. PRIMIR students tend to be reading far beyond the basic decoding levels and to be operating at higher comprehension levels. In effect, PRIMIR students may be "too advanced" for the tests chosen as criterion measures. Of course, it is possible that the same argument prevails for the traditional programs as well. This finding merely points up the need for more finite research into the effects of special programs relative to variables that operate to bring about change or non-change.

To further illustrate and validate the efficacy of the PRIMIR program total reading scores have been graphed to show relative placement by total reading raw scores as recorded on Tables 36 through 40. A quick glance at Table 36 indicates the relative achievement of boys and girls in the first grade for the four subgroups. Girls outscored boys and experimentals outscored controls. Table 37 indicates the same pattern.

Note that the scores in grade one ranged somewhere between 50 and 65. Second grades were somewhat higher and third grades higher still. Since these were nationally normed tests it may be claimed, with some reservation, that the child in the PRIMIR program made greater gains in reading achievement through the third grade than did the controls.

Once again, even though the differences were not generally significant, girls consistently outscored boys. That the differences were non-significant is a plus in favor of the PRIMIR program, as noted previously.

Tables 38 and 39 merely lend further credence to the above.

Table 40 is a display of the spread between schools on total reading scores by sub group. It is difficult to make much of this spread since the numbers of schools were not equal for each sub group. A better comparison might be made between PRIMIR D/D and Non-PRIMIR since that was essentially the purpose of the study in the first place.

If only these two are compared it can be seen that the spread for Non-PRIMIR was much greater and the mean of the spread was much lower than the PRIMIR D/D. The differences may reflect heavy student loading in specific buildings.

Just why the large spread occurred for Non-PRIMIR is not clear. Based on the mean the high was higher and the low was lower. It may indicate that for the higher scores superior teaching was the significant variable. It could also indicate a poor job of matching experimentals and controls.

It may mean that the PRIMIR pushes or permits more children to achieve to the limits of their capacity which would tend to homogenize groups at the primary level. Obviously the lower scoring school in PRIMIR was not as low as the one in NON-PRIMIR while the high scoring school was only slightly higher. There is, in theory, a ceiling for each age or grade level.

The implication is that the ceiling cannot be measured accurately for high achieving children at the primary level. There is no standardized test that can test the limits of the gifted or accelerated third grader. Therefore, it is conceivable that the PRIMIR subjects were actually performing tasks that could not be measured by the MAT or the CAT. For example, the use of the graphoneme by the PRIMIR group sets them apart from a usual norming group. The usual norming group for a standardized test has had a diet of traditional phonics which lasts through the three years of the primary reading program. By contrast the third grade PRIMIR group has gone far beyond basic phonics work. The average third grade PRIMIR group has literally forgotten the basic phonic rules which accompany the traditional basal reader. The average third grade PRIMIR group is well into the higher comprehension levels which accompany an individualized reading program.

It is sufficient, in summary, to note that the variables that contributed to the success or failure of either the control or experimental program were controlled as much as was possible and probably better than in most program research or evaluation projects. A listing of the identifiable variables follow with commentary about the attempts to control.

1. Teacher variable	1. Experimental teachers trained and supervised by the investigator. Control teachers with control chosen by socio-economic and geographic criteria.

2. Subjects	2. Chosen on basis of assignment. Large sample included general cross section of student population for Seattle School District.
3. Content	3. PRIMIR content highly organized and reasonably well defined both by agreement or convention and by written goal statement -- not rigid or static. Traditional program less well defined though quite structured. Generally depended upon scope and sequence of basal series in use.
4. Special organizational patterns	4. The PRIMIR program included several unique teaching techniques not normally considered a part of the traditional reading program. The total group, the basal group, the conference and self-selection, were unique to the PRIMIR classroom.
5. Special scheduling	5. For the PRIMIR program the divided day schedule offered a formidable additive since reading sections rarely exceeded more than one-half of the teacher's entire group or class. Traditional classrooms did not enjoy this advantage and no equating variable was introduced as an off-setting advantage.

6. Random selection	6. Randomization was not achieved in the strictest sense, but a general cross section of students for the Seattle School District constituted the two groups, experimental and control, and therefore randomization was not violated.
7. Equal variance	7. No tests were run for equal variance. The pretests were used as co-variates and equal variance was statistically achieved as a result.
8. Independence	8. Independence was assured in that no PRIMIR teacher was associated with a control classroom, and none of their control teachers adapted the PRIMIR techniques and methods into their own classroom.

Based upon the foregoing, it is possible to conclude that the design and subsequent data collection processes were as unbiased as it was possible to achieve for program evaluation especially on so large a scale.

AFFECTIVE ANALYSIS:

In both the 1971 study and for the present study, a survey was taken of parents' attitudes toward the program under the divided day schedule. The survey was sent to only those parents whose children were attending the PRIMIR D/D and

the EX/PRIMIR D/D programs. Results are recorded on Table 41. The table is self-explanatory and nothing more than brief comments are in order.

Parents responding obviously were those who normally respond to school questionnaires and the sampling cannot be construed as truly random or even representative of all parents with children in PRIMIR. At best the results provide some indication that in general parents were satisfied with the divided day schedule and the method of teaching reading.

Responses to Items 4 and 5 revealed the true worth of the program. Do parents feel that things are better than in the past; and would parents prefer the old regime, would seem to be a viable gauge of sentiment for a current program. In Item 4 over 64% of all parents responding felt their child was learning to read better under PRIMIR than they did in previous years. This figure is, of course, not completely accurate since many children had never been in a traditional program as evidenced by Item 2. On the other hand, many parents may have been reflecting sentiments based on the program in which siblings were enrolled. Many of the parents who responded had children who were in higher grades and who never experienced the PRIMIR program.

Item 5 indicated that most parents, in excess of 51%, would not prefer to have their child return to a traditional schedule and reading program.

In general, assuming that this questionnaire was reasonably reflective of most parents, it can be stated that the PRIMIR D/D was well accepted with only a small percentage dissenting.

RECOMMENDATIONS:

There is little reason to replicate this study with similar designs. The evaluation of PRIMIR has been repeated twice and both times the findings were similar. In the first study the results for second and third grades were not reported because of testing anomalies, but for first grades, results were similar to those reported in this study. The earlier study has been placed on file with ERIC.[16]

There is some work that should be done to strengthen reading achievement and to gain understanding of the factors that make PRIMIR so successful. First, a study of the contribution of the graphoneme is essential. It appears that the graphoneme may offer hope for children and teachers alike. The graphoneme may be a valuable concept for minimizing rule oriented phonics teaching and it may also eliminate confusion about which letter and which concept to teach first.

The divided day requires more exposure. It would be well to design a massive study across and between districts that utilize that form of scheduling with primary reading programs and those that do not.

It might be valuable to determine the effects of conferencing on children. A regularly scheduled conference on a one-to-one basis might be a major factor in any style reading program.

Finally, the saturation and self-selection routine should be investigated more thoroughly. There is every reason to believe that the self-selection activity is a strong motivator for all readers from the weakest to the most prolific. Saturation is not to be dismissed lightly either. Surround a child with the environment that cries out "READ, READ, READ," and determine whether there is value in such a concept.[17]

CONCLUSION:

It appears obvious after a careful review of all the findings and the discussions of the variables involved that the overall assumption that no significance differences would accrue to the PRIMIR program was false and the overall hypothesis was rejected. There were significant differences in reading achievement favoring the PRIMIR when compared to the NON-PRIMIR programs, and under similar circumstances, those findings and conclusions will generalize.

Rejection or acceptance of the sub-hypotheses was not so clear cut. In general there were differences between experimental and control boys and girls, but the findings were not consistent. Therefore, the conclusion was made that for sub hypotheses one and two, only partial rejection was possible.

For sub hypothesis three, rejection was determined as the only decision possible. Clearly those subjects who were enrolled under divided day schedule scored significantly superior in reading achievement when compared to those who were enrolled in a traditional single schedule program.

It was concluded that subjects enrolled in PRIMIR D/D were significantly superior to NON-PRIMIR and NON-PRIMIR D/D subjects in reading achievement. It was appropriate to further conclude, based upon the degree of variable control that was achieved, that the PRIMIR program will generalize to a population similar to the one tested.

A final conclusion was made that the divided day schedule was a superior schedule when compared to the single schedule, and that subjects enrolled in the divided day plan will experience greater reading achievement accordingly. This conclusion will also generalize to a population similar to that described in this study.

BIBLIOGRAPHY

1. Veatch, Jeannette. Individualizing Your Reading Program. New York: G. P. Putnam's Sons, 1959.

2. Dechant, Emerald V. Improving the Teaching of Reading. Englewood Cliffs: Prentice-Hall, Inc., 1970. pp. 246, 255-256.

3. Frost, Joe L., ed. Issues and Innovations in the Teaching of Reading. Gudelia A. Fox and Raymond B. Fox, "The Individualized Reading Controversy," pp. 162-167.

4. Davis, Floyd W., and James S. Lucas. "An Experiment in Individualized Reading," The Reading Teacher, May, 1971. 24:737+

5. _____, The PRIMIR Program, ERIC, CS NO. 000681. Listed in Research in Education, January, 1974.

6. _____, An Experiment in Individualized Reading: A Follow Up Study, School Year 1971-72. An Unpublished Study, Seattle Public Schools, Basic Skills Department, 1971.

7. Clymer, Theodore and Thomas Barrett. Prereading Battery, Form A. Boston: Ginn and Company, 1967.

8. Durost, Walter N. and others. Metropolitan Achievement Tests, Primary I,F,G,H, 1970.

9. Tiegs, Ernest W. and Willis A. Clark. California Achievement Tests, Level 2 Form A, 1970.

10. Davis, Floyd W. Individualized Reading Centers: Organization and Operation. Seattle: Seattle Public Schools, 1971.

11. Barrett, Thomas. Innovation and Change in Reading Instruction, Sixty-Seventh Yearbook of the National Society for the Study of Education, Part II, pp. 19-23.

12. Jones, Virginia W. Decoding and Learning to Read. Portland: Northwest Regional Laboratory, 1967.

13. Criscuolo, Nicholas P. Improving Classroom Reading Instruction. Belmont, CA: Wadsworth Publishing Co., 1973. p. 23+

14. The Jefferson Divided Day Plan.

15. Op.Cit., bibliographic reference no. 5.

16. Op.Cit., bibliographic reference no. 5.

17. Fader, Daniel N. and Elton B. McNeil. Hooked on Books: Program and Proof. Berkeley: Medallion Books, 1968.

Comparison: Total Experimental vs. Total Control- Gr.1 — Mean MAT Scores and Direction of Growth — Table 3

Sex	Total Experimental	Control	Difference	Direction	Significance
WORD KNOWLEDGE					
Boy	28.6675	26.6674	2.0001	PRIMIR D/D	Sign. @ .05*
Girl	30.3973	28.7788	1.6185	PRIMIR D/D	Sign. @ .01*
WORD ANALYSIS					
Boy	31.3766	29.2953	2.0813	PRIMIR D/D	Sign. @ .05*
Girl	33.5781	31.8341	1.744	PRIMIR D/D	Sign. @ .05*
READING					
Boy	26.3714	23.0116	3.3598	PRIMIR D/D	Sign. @ .01*
Girl	29.8795	26.4183	3.4612	PRIMIR D/D	Sign. @ .01*
TOTAL MAT					
Boy	54.8857	49.6767	5.2090	PRIMIR D/D	Sign. @ .01*
Girl	60.2795	55.2452	5.0343	PRIMIR D/D	Sign. @ .01*

*Adjusted by Analysis of Covariance

Comparison: Ex/PRIMIR D/D vs. Total Control — Mean MAT Scores and Direction of Growth — Table 4

Sex	Ex/PRIMIR D/D	Control	Difference	Direction	Significance
WORD KNOWLEDGE					
Boy	28.2680	26.6674	1.6006	Ex/PRIMIR D/D	NS @ .05
Girl	29.7564	28.7788	.9776	Ex/PRIMIR D/D	NS @ .05
WORD ANALYSIS					
Boy	30.0412	29.2953	.7459	Ex/PRIMIR D/D	NS @ .05
Girl	31.5128	31.8341	.3213	Control	NS @ .05
READING					
Boy	26.1649	23.0116	3.1533	Ex/PRIMIR D/D	S @ .01
Girl	27.9359	26.4183	1.5176	Ex/PRIMIR D/D	NS @ .05
TOTAL MAT					
Boy	54.0928	49.6767	4.4161	Ex/PRIMIR D/D	S @ .05
Girl	57.6026	55.2452	2.3574	Ex/PRIMIR D/D	NS@ .05

Comparison: Ex/PRIMIR D/D vs. PRIMIR D/D - Gr. 1 Mean MAT Scores and Direction of Growth Table 5

WORD KNOWLEDGE					
Sex	Ex/PRIMIR D/D	PRIMIR D/D	Difference	Direction	Significance
Boy	28.2680	28.8021	.5341	PRIMIR D/D	NS @ .05*
Girl	29.7564	30.5714	.8015	PRIMIR D/D	NS @ .05*

WORD ANALYSIS					
Sex	Ex/PRIMIR D/D	PRIMIR D/D	Difference	Direction	Significance
Boy	30.0412	31.8264	1.7852	PRIMIR D/D	NS @ .05*
Girl	31.5128	34.1394	2.6266	PRIMIR D/D	NS @ .05*

READING					
Sex	Ex/PRIMIR D/D	PRIMIR D/D	Difference	Direction	Significance
Boy	26.1649	26.4410	.2761	PRIMIR D/D	NS @ .05*
Girl	27.9359	30.4077	2.4718	PRIMIR D/D	NS @ .05*

TOTAL MAT					
Sex	Ex/PRIMIR D/D	PRIMIR	Difference	Direction	Significance
Boy	54.0928	55.1528	1.0600	PRIMIR D/D	NS @ .05*
Girl	57.6026	61.0070	3.4044	PRIMIR D/D	NS @ .05*

*Adjusted by Analysis of Covariance

Comparison: PRIMIR D/D vs. Total Control Mean MAT Scores and Direction of Growth Table 6

WORD KNOWLEDGE					
Sex	PRIMIR D/D	Control	Difference	Direction	Significance
Boy	28.8021	26.6674	2.1347	PRIMIR D/D	NS @ .05*
Girl	30.5714	28.7788	1.7926	PRIMIR D/D	Sign. @ .05*

WORD ANALYSIS					
Sex	PRIMIR D/D	Control	Difference	Direction	Significance
Boy	31.8264	29.2953	2.5311	PRIMIR D/D	Sign. @ .05*
Girl	34.1394	31.8341	2.3053	PRIMIR D/D	Sign. @ .01*

READING					
Sex	PRIMIR D/D	Control	Difference	Direction	Significance
Boy	26.4410	23.0116	3.4294	PRIMIR D/D	Sign. @ .05*
Girl	30.4077	26.4183	3.9894	PRIMIR D/D	Sign. @ .01*

TOTAL MAT					
Sex	PRIMIR D/D	Control	Difference	Direction	Significance
Boy	55.1528	49.6767	5.4761	PRIMIR D/D	Sign. @ .01*
Girl	61.0070	55.2452	5.7618	PRIMIR D/D	Sign. @ .01*

*Adjusted by Analysis of Covariance

Comparison: Ex/PRIMIR D/D vs. Non-PRIMIR D/D - Gr.1 Mean MAT Scores and Direction of Growth Table 7

WORD KNOWLEDGE					
Sex	Ex/PRIMIR D/D	Non-PRIMIR D/D	Difference	Direction	Significance
Boy	28.2680	27.0099	1.2581	Ex/PRIMIR D/D	NS @ .05
Girl	29.7564	28.8364	.9200	Ex/PRIMIR D/D	NS @ .05
WORD ANALYSIS					
Sex	Ex/PRIMIR D/D	Non-PRIMIR D/D	Difference	Direction	Significance
Boy	30.0412	29.1823	.8589	Ex/PRIMIR D/D	NS @ .05
Girl	31.5128	31.3576	.1552	Ex/PRIMIR D/D	NS @ .05
READING					
Sex	Ex/PRIMIR D/D	Non-PRIMIR D/D	Difference	Direction	Significance
Boy	26.1649	23.2709	2.8940	Ex/PRIMIR D/D	Sign. @ .05
Girl	27.9359	25.9576	1.9783	Ex/PRIMIR D/D	NS @ .05
TOTAL MAT					
Sex	Ex/PRIMIR D/D	Non-PRIMIR D/D	Difference	Direction	Significance
Boy	54.0928	50.2759	3.8169	Ex/PRIMIR D/D	NS @ .05
Girl	57.6026	54.7333	2.8693	Ex/PRIMIR D/D	NS @ .05

Comparison: Ex/PRIMIR D/D vs. Non-PRIMIR Mean MAT Scores and Direction of Growth Table 8

WORD KNOWLEDGE					
Sex	Ex/PRIMIR D/D	Non-PRIMIR	Difference	Direction	Significance
Boy	28.2680	26.3612	1.9068	Ex/PRIMIR D/D	Sign. @ .05
Girl	29.7564	28.7410	1.0154	Ex/PRIMIR D/D	NS @ .05
WORD ANALYSIS					
Sex	Ex/PRIMIR D/D	Non-PRIMIR	Difference	Direction	Significance
Boy	30.0412	29.3965	.6447	Ex/PRIMIR D/D	NS @ .05
Girl	31.5128	32.1474	.6346	Non-PRIMIR	NS @ .05
READING					
Sex	Ex/PRIMIR D/D	Non-PRIMIR	Difference	Direction	Significance
Boy	26.1649	22.7797	3.3852	Ex/PRIMIR D/D	Sign. @ .05
Girl	27.9359	26.7211	1.2148	Ex/PRIMIR D/D	NS @ .05
TOTAL MAT					
Sex	Ex/PRIMIR D/D	Non-PRIMIR	Difference	Direction	Significance
Boy	54.0928	49.1410	4.9518	Ex/PRIMIR D/D	Sign. @ .05
Girl	57.6026	55.5817	2.0209	Ex/PRIMIR D/D	NS @ .05

Comparison: PRIMIR D/D vs. Non-PRIMIR D/D - Gr. 1 Mean MAT Scores and Direction of Growth

Table 9

Sex	PRIMIR D/D	Non-PRIMIR D/D	Difference	Direction	Significance
WORD KNOWLEDGE					
Boy	28.8021	27.0099	1.7922	PRIMIR D/D	NS @ .05*
Girl	30.5714	28.8364	1.7350	PRIMIR D/D	NS @ .05*
WORD ANALYSIS					
Boy	31.8264	29.1823	2.6441	PRIMIR D/D	NS @ .05*
Girl	34.1394	31.3526	2.7818	PRIMIR D/D	Sign. @ .05*
READING					
Boy	26.4410	23.2709	3.1701	PRIMIR D/D	NS @ .05*
Girl	30.4077	25.9576	4.4501	PRIMIR D/D	Sign. @ .05*
TOTAL MAT					
Boy	55.1528	50.2759	4.8769	PRIMIR D/D	NS @ .05*
Girl	61.0070	54.7333	6.2737	PRIMIR D/D	NS @ .05*

*Adjusted by Analysis of Covariance

Comparison: PRIMIR D/D vs. Non-PRIMIR - Gr. 1 Mean MAT Scores and Direction of Growth

Table 10

Sex	PRIMIR D/D	Non-PRIMIR	Difference	Direction	Significance
WORD KNOWLEDGE					
Boy	28.8021	26.3612	2.4409	PRIMIR D/D	Sign. @ .01*
Girl	30.5714	28.7410	1.8304	PRIMIR D/D	Sign. @ .01*
WORD ANALYSIS					
Boy	31.8264	29.3965	2.4299	PRIMIR D/D	Sign. @ .01*
Girl	34.1394	32.1474	1.9920	PRIMIR D/D	Sign. @ .05*
READING					
Boy	26.4410	22.7797	3.6613	PRIMIR D/D	Sign. @ .01*
Girl	30.4077	26.7211	3.6866	PRIMIR D/D	Sign. @ .01*
TOTAL MAT					
Boy	55.1528	49.1410	6.0118	PRIMIR D/D	Sign. @ .01*
Girl	61.0070	55.5817	5.4253	PRIMIR D/D	Sign. @ .01*

*Adjusted by Analysis of Covariance

Comparison: Total Experimental vs. Total Control — Mean CAT Reading Scores and Direction of Growth — Table 11

VOCABULARY

Grade	Experimental Mean Score	Total Control Mean Score	Difference	Direction	Significance
2	33.5083	31.5169	1.9914	Experimental	S @ .01*
3	36.8520	35.7306	1.1204	Experimental	NS @ .05*
2 & 3	35.0150	33.1969	1.8181	Experimental	S @ .01*

COMPREHENSION

Grade	Experimental Mean Score	Total Control Mean Score	Difference	Direction	Significance
2	28.5821	26.1610	2.4211	Experimental	S @ .01*
3	35 4340	32.3939	3.0401	Experimental	S @ .01*
2 & 3	31.6697	28.6458	3.0236	Experimental	S @ .01*

TOTAL READING

Grade	Experimental Mean Score	Total Control Mean Score	Difference	Direction	Significance
2	62.0810	57.6617	4.4193	Experimental	S @ .01*
3	72.2845	68.1061	4.1829	Experimental	S @ .01*
2 & 3	66.6789	61.8259	4.8530	Experimental	S @ .01*

*Adjusted by Analysis of Covariance

Comparison: PRIMIR D/D vs. Total Control — Mean CAT Reading Scores and Direction of Growth — Table 12

VOCABULARY

Grade	Ex PRIMIR D/D Mean Score	Total Control Mean Score	Difference	Direction	Significance
2	33.3592	31.5169	1.8423	Ex PRIMIR D/D	S @ .01
3	35.5603	35.7439	.1836	Total Control	NS @ .05
2 & 3	34.2536	33.1969	1.0567	Ex PRIMIR D/D	S @ .05

COMPREHENSION

Grade	Ex PRIMIR D/D Mean Score	Total Control Mean Score	Difference	Direction	Significance
2	29.8641	26.1610	3.7031	Ex PRIMIR D/D	S @ .01
3	33.6099	32.3939	1.2160	Ex PRIMIR D/D	NS @ .05
2 & 3	31.3862	28.6461	2.7401	Ex PRIMIR D/D	S @ .01

TOTAL READING

Grade	Ex PRIMIR D/D Mean Score	Total Control Mean Score	Difference	Direction	Significance
2	63.2282	57.6617	5.5665	Ex PRIMIR D/D	S @ .01
3	69.1348	68.1061	1.0287	Ex PRIMIR D/D	NS @ .05
2 & 3	65.6282	61.8259	3.8023	Ex PRIMIR D/D	S @ .01

Comparison: Ex PRIMIR D/D vs. Total PRIMIR D/D — Mean CAT Reading Scores and Direction of Growth — Table 13

VOCABULARY

Grade	Ex PRIMIR D/D Mean Score	PRIMIR Mean Score	Difference	Direction	Significance
2	33.3592	33.5568	.1976	Ex PRIMIR D/D	NS @ .05
3	35.5603	37.1843	1.6240	PRIMIR D/D	S @ .05*
2 & 3	34.2536	35.2386	.985	PRIMIR D/D	NS @ .05*

COMPREHENSION

Grade	Ex PRIMIR D/D Mean Score	PRIMIR D/D Mean Score	Difference	Direction	Significance
2	29.8641	28.1656	1.6985	PRIMIR D/D	NS @ .05
3	33.6099	35.9033	2.2934	PRIMIR D/D	NS @ .05*
2 & 3	31.3862	31.7530	.3668	PRIMIR D/D	S @ .01*

TOTAL READING

Grade	Ex PRIMIR D/D Mean Score	PRIMIR D/D Mean Score	Difference	Direction	Significance
2	63.2282	61.7082	1.5200	PRIMIR D/D	NS @ .05
3	69.1348	73.0949	3.9601	PRIMIR D/D	NS @ .05*
2 & 3	65.6282	66.9873	1.3591	PRIMIR D/D	S @ .01*

*Adjusted by Analysis of Covariance

Comparison: PRIMIR D/D vs. Total Control — Mean CAT Reading Scores and Direction of Growth — Table 14

VOCABULARY

Grade	PRIMIR D/D Mean Score	Total Control Mean Score	Difference	Direction	Significance
2	33.5568	31.5169	2.0399	PRIMIR D/D	S @ .01*
3	37.1843	35.7306	1.4537	PRIMIR D/D	NS @ .05*
2 & 3	35.2386	33.1969	2.0417	PRIMIR D/D	S @ .01*

COMPREHENSION

Grade	PRIMIR D/D Mean Score	Total Control Mean Score	Difference	Direction	Significance
2	28.1656	26.1610	2.0046	PRIMIR D/D	NS @ .05*
3	35.9033	32.3939	3.5094	PRIMIR D/D	S @ .01*
2 & 3	31.7530	28.6461	3.1069	PRIMIR D/D	S @ .05*

TOTAL READING

Grade	PRIMIR D/D Mean Score	Total Control Mean Score	Difference	Direction	Significance
2	61.7082	57.6617	4.0465	PRIMIR D/D	S @ .05*
3	73.0949	68.1061	4.9888	PRIMIR D/D	S @ .01*
2 & 3	66.9873	61.8259	5.1614	PRIMIR D/D	S @ .01*

Comparison: Ex PRIMIR D/D vs. Non-PRIMIR D/D

Mean CAT Reading Scores and Direction of Growth

Table 15

VOCABULARY

Grade	Ex PRIMIR D/D Mean Score	Non-PRIMIR D/D Mean Score	Difference	Direction	Significance
2	33.3592	32.8861	.4731	Ex PRIMIR D/D	NS @ .05
3	35.5603	36.2944	.7341	Non-PRIMIR D/D	NS @ .05
2 & 3	34.2536	34.2623	.0087	Non-PRIMIR D/D	NS @ .05

COMPREHENSION

Grade	Ex PRIMIR D/D Mean Score	Non-PRIMIR D/D Mean Score	Difference	Direction	Significance
2	29.8641	28.6772	1.1899	Ex PRIMIR D/D	NS @ .05
3	33.6099	33.2103	.3996	Ex PRIMIR D/D	NS @ .05
2 & 3	31.3862	30.5075	.8112	Ex PRIMIR D/D	NS @ .05

TOTAL READING

Grade	Ex PRIMIR D/D Mean Score	Non-PRIMIR D/D Mean Score	Difference	Direction	Significance
2	63.2282	61.5222	1.706	Ex PRIMIR D/D	NS @ .05
3	69.1348	69.5047	.3699	Non PRIMIR D/D	NS @ .05
2 & 3	65.6282	64.7453	.8829	Ex PRIMIR D/D	NS

Comparison: Ex PRIMIR D/D vs. Non-PRIMIR

Mean CAT Reading Scores and Direction of Growth

Table 16

*Adjusted by Analysis of Covariance

VOCABULARY

Grade	Ex PRIMIR D/D Mean Score	Non-PRIMIR Mean Score	Difference	Direction	Significance
2	33.3592	30.4941	2.8651	Ex PRIMIR D/D	S @ .01*
3	35.5603	35.2935	.8538	Ex PRIMIR D/D	NS @ .05
2 & 3	34.2536	32.3891	1.8645	Ex PRIMIR D/D	S @ .05*

COMPREHENSION

Grade	Ex PRIMIR D/D Mean Score	Non-PRIMIR Mean Score	Difference	Direction	Significance
2	29.8641	24.2813	5.5828	Ex PRIMIR D/D	S @ .01*
3	33.6099	31.7609	1.8490	Ex PRIMIR D/D	NS @ .05
2 & 3	31.3862	27.2346	4.1516	Ex PRIMIR D/D	S @ .01*

TOTAL READING

Grade	Ex PRIMIR D/D Mean Score	Non-PRIMIR Mean Score	Difference	Direction	Significance
2	63.2282	54.7778	8.4504	Ex PRIMIR D/D	S @ .01*
3	69.1348	67.0217	2.1131	Ex PRIMIR D/D	NS @ .05
2 & 3	65.6282	59.6123	6.0159	Ex PRIMIR D/D	S @ .01*

Comparison: PRIMIR D/D vs. Non-PRIMIR D/D

Mean CAT Reading Scores and Direction of Growth

Table 17

VOCABULARY

Grade	PRIMIR D/D Mean Score	Non-PRIMIR D/D Mean Score	Difference	Direction	Significance
2	33.5568	32.8861	.6707	PRIMIR D/D	NS @ .05
3	37.1843	36.2944	.8899	PRIMIR D/D	NS @ .05*
2 & 3	35.2386	34.2623	.9763	PRIMIR D/D	S @ .05*

COMPREHENSION

Grade	PRIMIR D/D Mean Score	Non-PRIMIR D/D Mean Score	Difference	Direction	Significance
2	28.1656	28.6772	.5116	Non-PRIMIR D/D	NS @ .05
3	35.9033	33.2103	2.6930	PRIMIR D/D	S @ .01*
2 & 3	31.7530	30.5075	1.2455	PRIMIR D/D	NS @ .05*

TOTAL READING

Grade	PRIMIR D/D Mean Score	Non-PRIMIR D/D Mean Score	Difference	Direction	Significance
2	61.7082	61.5222	.1860	PRIMIR D/D	NS @ 05
3	73.0949	69.5047	3.5902	PRIMIR D/D	S @ .01*
2 & 3	66.9873	64.7453	2.2420	PRIMIR D/D	S @ .05*

*Adjusted by Analysis of Covariance

Comparison: PRIMIR D/D vs. Non-PRIMIR

Mean CAT Reading Scores and Direction of Growth

Table 18

VOCABULARY

Grade	PRIMIR D/D Mean Score	Non-PRIMIR Mean Score	Difference	Direction	Significance
2	33.5568	30.4941	3.0627	PRIMIR D/D	S @ .01*
3	37.1843	35.2935	1.8908	PRIMIR D/D	NS @ .05*
2 & 3	35.2386	32.3891	2.8495	PRIMIR D/D	S @ .01*

COMPREHENSION

Grade	PRIMIR D/D Mean Score	Non-PRIMIR Mean Score	Difference	Direction	Significance
2	28.1656	24.2813	3.8843	PRIMIR D/D	NS @ .05*
3	35.9033	31.7609	4.1424	PRIMIR D/D	NS @ .05*
2 & 3	31.7530	27.2346	4.5184	PRIMIR D/D	S @ .05*

TOTAL READING

Grade	PRIMIR D/D Mean Score	Non-PRIMIR Mean Score	Difference	Direction	Significance
2	61.7082	54.7778	6.9304	PRIMIR D/D	S @ .01*
3	73.0949	67.0217	6.0732	PRIMIR D/D	NS @ .05*
2 & 3	66.9873	59.6123	7.3750	PRIMIR D/D	S @ .01*

Comparison: Experimental Boys vs. Total Control Boys — Mean CAT Reading Scores and Direction of Growth — Table 19

VOCABULARY

Grade	Experimental Mean Score	Control Mean Score	Difference	Direction	Significance
2	33.1369	30.8043	2.3326	Experimental	S @ .01*
3	36.4395	35.5082	.9313	Experimental	NS @ .05*
2 & 3	34.6337	32.6797	1.9540	Experimental	S @ .01*

COMPREHENSION

Grade	Experimental Mean Score	Control Mean Score	Difference	Direction	Significance
2	27.6993	25.1549	2.5444	Experimental	NS @ .05*
3	34.0472	31.3566	2.6906	Experimental	NS @ .05*
2 & 3	30.5762	27.6275	2.9487	Experimental	S @ .01*

TOTAL READING

Grade	Experimental Mean Score	Control Mean Score	Difference	Direction	Significance
2	60.8337	55.9239	4.9098	Experimental	S @ .01*
3	70.4867	66.8689	3.6178	Experimental	NS @ .05*
2 & 3	65.2086	60.2876	4.9210	Experimental	S @ .01*

*Adjusted by Analysis of Covariance

Comparison: PRIMIR D/D vs. Total Control — Mean CAT Reading Scores and Direction of Growth — Table 20

VOCABULARY

Grade	PRIMIR D/D Mean Score	Total Control Mean Score	Difference	Direction	Significance
2	32.5392	30.8043	1.7349	PRIMIR D/D	NS @ .05
3	34.8955	35.5082	.6127	Total Control	NS @ .05
2 & 3	33.4734	32.6797	.7938	PRIMIR D/D	NS @ .05

COMPREHENSION

Grade	PRIMIR D/D Mean Score	Total Control Mean Score	Difference	Direction	Significance
2	28.5392	25.1549	3.3843	PRIMIR D/D	S @ .01
3	32.0000	31.3566	.6434	PRIMIR D/D	NS @ .05
2 & 3	29.9112	27.6275	2.2837	PRIMIR D/D	S @ .05

TOTAL READING

Grade	PRIMIR D/D Mean Score	Total Control Mean Score	Difference	Direction	Significance
2	61.0882	55.9239	5.1643	PRIMIR D/D	S @ .05
3	66.8955	66.8689	.0266	PRIMIR D/D	NS @ .05
2 & 3	63.3905	60.2876	3.1059	PRIMIR D/D	S @ .01

Comparison: Ex PRIMIR D/D Boys vs. PRIMIR D/D Boys

Mean CAT Reading Scores and Direction of Growth

Table 21

VOCABULARY

Grade	Ex PRIMIR D/D Mean Score	PRIMIR D/D Mean Score	Difference	Direction	Significance
2	32.5392	33.3355	.7963	PRIMIR D/D	NS @ .05
3	34,8955	36.8199	1.9422	PRIMIR D/D	NS @ .05*
2 & 3	33.4734	34.9724	1.4990	PRIMIR D/D	NS @ .05*

COMPREHENSION

Grade	Ex PRIMIR D/D Mean Score	PRIMIR D/D Mean Score	Difference	Direction	Significance
2	28.5392	27.4202	1.119	PRIMIR D/D	NS @ .05
3	32.000	34.5515	2.5515	PRIMIR D/D	NS @ .05*
2 & 3	29.9112	30.7703	.8591	PRIMIR D/D	S @ .05*

TOTAL READING

Grade	Ex PRIMIR D/D Mean Score	PRIMIR D/D Mean Score	Difference	Direction	Significance
2	61.0882	60.7492	.3390	PRIMIR D/D	NS @ .05
3	66.8955	71.3713	4.4758	PRIMIR D/D	NS @ .05*
2 & 3	63.3905	65.7392	2.3487	PRIMIR D/D	NS @ .05*

*Adjusted by Analysis of Covariance

Comparison: PRIMIR D/D Boys vs. Total Non-PRIMIR D/D Boys

Mean CAT Reading Scores and Direction of Growth

Table 22

VOCABULARY

Grade	PRIMIR D/D Mean Score	Non-PRIMIR D/D Mean Score	Difference	Direction	Significance
2	33.3355	30.8043	2.5312	PRIMIR D/D	S @ .01*
3	36.8199	35.5082	1.3117	PRIMIR D/D	NS @ .05*
2 & 3	34.9724	32.6797	2.2927	PRIMIR D/D	S @ .01*

COMPREHENSION

Grade	PRIMIR D/D Mean Score	Non-PRIMIR D/D Mean Score	Difference	Direction	Significance
2	27.4202	25.1549	2.2653	PRIMIR D/D	NS @ .05*
3	34.5515	31.3566	3.1949	PRIMIR D/D	NS @ .05*
2 & 3	30.7703	27.6275	3.1428	PRIMIR D/D	NS @ .05*

TOTAL READING

Grade	PRIMIR D/D Mean Score	Non-PRIMIR D/D Mean Score	Difference	Direction	Significance
2	60.7492	55.9239	4.8253	PRIMIR D/D	S @ .05*
3	71.3713	66.8689	4.5024	PRIMIR D/D	NS @ .05*
2 & 3	65.7392	60.2876	5.4516	PRIMIR D/D	S @ .01*

Comparison: Ex PRIMIR D/D Boys vs. Non-PRIMIR D/D Boys

Mean CAT Reading Scores and Direction of Growth

Table 23

VOCABULARY

Grade	Ex PRIMIR D/D Mean Score	Non-PRIMIR D/D Mean Score	Difference	Direction	Significance
2	32.5392	32.5535	.0143	Non-PRIMIR D/D	NS @ .05
3	34.8955	36.3333	1.4378	Non-PRIMIR D/D	NS @ .05
2 & 3	33.4734	34.0307	.5573	Control D/D	NS @ .05*

COMPREHENSION

Grade	Ex PRIMIR D/D Mean Score	Non-PRIMIR D/D Mean Score	Difference	Direction	Significance
2	28.5392	27.6541	.8851	Ex PRIMIR D/D	NS @ .05
3	32.0000	32.4216	.4216	Non-PRIMIR D/D	NS @ .05
2 & 3	29.9112	29.5172	.3940	Ex PRIMIR D/D	S @ .05*

TOTAL READING

Grade	Ex PRIMIR D/D Mean Score	Non-PRIMIR D/D Mean Score	Difference	Direction	Significance
2	61.0882	60.1258	.9682	Ex PRIMIR D/D	NS @ .05
3	66.8955	68.7549	1.8594	Non-PRIMIR D/D	NS @ .05
2 & 3	63.3905	63.4981	.1076	Non-PRIMIR D/D	S @ .01*

*Adjusted by Analysis of Covariance

Comparison: Ex PRIMIR D/D Boys vs. Non-PRIMIR Boys

Mean CAT Reading Scores and Direction of Growth

Table 24

VOCABULARY

Grade	Ex PRIMIR D/D Mean Score	Non-PRIMIR Mean Score	Difference	Direction	Significance
2	32.5392	29.4737	3.0655	Ex PRIMIR D/D	S @ .01*
3	34.8955	34.9155	.0200	Non-PRIMIR	NS @ .05
2 & 3	33.4734	31.6752	1.7982	Ex PRIMIR D/D	S @ .05

COMPREHENSION

Grade	Ex PRIMIR D/D Mean Score	Non-PRIMIR Mean Score	Difference	Direction	Significance
2	28.5392	23.2536	5.2856	Ex PRIMIR D/D	S @ .01*
3	32.0000	30.5915	1.4085	Ex PRIMIR D/D	NS @ .05
2 & 3	29.9112	26.2222	3.6890	Ex PRIMIR D/D	S @ .01

TOTAL READING

Grade	Ex PRIMIR D/D Mean Score	Non-PRIMIR Mean Score	Difference	Direction	Significance
2	61.0882	52.7273	8.3609	Ex PRIMIR D/D	S @ .01*
3	66.8955	65.5141	1.3814	Ex PRIMIR D/D	NS @ .05
2 & 3	63.3905	57.9003	5.4902	Ex PRIMIR D/D	S @ .01

Comparison: PRIMIR D/D Boys vs. Non-PRIMIR D/D Boys — Mean CAT Reading Scores and Direction of Growth — Table 25

VOCABULARY

Grade	PRIMIR D/D Mean Scores	Non-PRIMIR D/D Mean Scores	Difference	Direction	Significance
2	33.3355	32.5535	.7820	PRIMIR D/D	NS @ .05
3	36.8199	36.3333	.4866	PRIMIR D/D	NS @ .05
2 & 3	34.9724	34.0307	.9417	PRIMIR D/D	S @ .05

COMPREHENSION

Grade	PRIMIR D/D Mean Scores	Non-PRIMIR D/D Mean Scores	Difference	Direction	Significance
2	27.4202	27.6541	.2339	Non-PRIMIR D/D	NS @ .05
3	34.5515	32.4216	2.1299	PRIMIR D/D	S @ .05
2 & 3	30.7703	29.5172	1.2531	PRIMIR D/D	NS @ .05

TOTAL READING

Grade	PRIMIR D/D Mean Scores	Non-PRIMIR D/D Mean Scores	Difference	Direction	Significance
2	60.7492	60.1258	.6234	PRIMIR D/D	NS @ .05
3	71.3713	68.7549	2.6164	PRIMIR D/D	NS @ .05
2 & 3	65.7392	63.4981	2.2411	PRIMIR D/D	NS @ .05

*Adjusted by Analysis of Covariance

Comparison: PRIMIR D/D Boys vs. Non-PRIMIR Boys — Mean CAT Reading Scores and Direction of Growth — Table 26

VOCABULARY

Grade	PRIMIR D/D Mean Score	Non-PRIMIR Mean Score	Difference	Direction	Significance
2	33.3355	29.4737	3.8618	PRIMIR D/D	S @ .01*
3	36.8199	34.9155	1.9044	PRIMIR D/D	NS @ .05*
2 & 3	34.9724	31.6752	3.2972	PRIMIR D/D	S @ .01*

COMPREHENSION

Grade	PRIMIR D/D Mean Score	Non-PRIMIR Mean Score	Difference	Direction	Significance
2	27.4202	23.2536	4.1666	PRIMIR D/D	NS @ .05*
3	34.5515	30.5915	3.9600	PRIMIR D/D	NS @ .05*
2 & 3	30.7703	26.2222	4.5481	PRIMIR D/D	NS @ .05*

TOTAL READING

Grade	PRIMIR D/D Mean Score	Non-PRIMIR Mean Score	Difference	Direction	Significance
2	60.7492	52.7273	8.0219	PRIMIR D/D	S @ .05*
3	71.3713	65.5141	5.8572	PRIMIR D/D	NS @ .05*
2 & 3	65.7392	57.9003	7.8389	PRIMIR D/D	S @ .05*

Comparison: Total Experimental Girls vs. Total Control Girls — Mean CAT Reading Scores and Direction of Growth — Table 27

VOCABULARY

Grade	Experimental Mean Score	Control Mean Score	Difference	Direction	Significance
2	33.8608	32.2237	1.6371	Experimental	S @ .05*
3	37.2514	35.9512	1.3002	Experimental	NS @ .05*
2 & 3	35.3803	33.7099	1.6704	Experimental	S @ .05*

COMPREHENSION

Grade	Experimental Mean Score	Control Mean Score	Difference	Direction	Significance
2	29.4200	27.1590	2.2610	Experimental	S @ .05*
3	36.7771	33.4228	3.3543	Experimental	S @ .01*
2 & 3	32.7170	29.6564	3.0606	Experimental	S @ .01*

TOTAL READING

Grade	Experimental Mean Score	Control Mean Score	Difference	Direction	Significance
2	63.2645	59.3854	3.8791	Experimental	S @ .01*
3	74.0257	69.3333	4.6924	Experimental	S @ .05*
2 & 3	68.0871	63.3517	4.7354	Experimental	S @ .01*

*Adjusted by Analysis of Covariance

Comparison: Ex PRIMIR D/D Girls vs. Total Control Girls — Mean CAT Reading Scores and Direction of Growth — Table 28

VOCABULARY

Grade	Ex PRIMIR D/D Mean Score	Control Mean Score	Difference	Direction	Significance
2	34.1635	32.2237	1.9398	Ex PRIMIR D/D	S @ .05
3	36.1622	35.9512	.2110	Ex PRIMIR D/D	NS @ .05
2 & 3	34.9944	33.7099	1.2845	Ex PRIMIR D/D	S @ .05

COMPREHENSION

Grade	Ex PRIMIR D/D Mean Score	Control Mean Score	Difference	Direction	Significance
2	31.1635	27.1590	4.0045	Ex PRIMIR D/D	S @ .01
3	35.0676	33.4228	1.6448	Ex PRIMIR D/D	NS @ .05
2 & 3	32.7865	29.6564	3.1301	Ex PRIMIR D/D	S @ .01

TOTAL READING

Grade	Ex PRIMIR D/D Mean Score	Control Mean Score	Difference	Direction	Significance
2	65.3269	59.3854	5.9415	Ex PRIMIR D/D	S @ .01
3	71.1622	69.3333	1.8289	Ex PRIMIR D/D	NS @ .05
2 & 3	67.7528	63.3517	4.4011	Ex PRIMIR D/D	S @ .01

Comparison: Ex PRIMIR D/D Girls vs. PRIMIR D/D Girls — Mean CAT Reading Scores and Direction of Growth — Table 29

VOCABULARY

Grade	Ex PRIMIR D/D Mean Score	PRIMIR D/D Mean Score	Difference	Direction	Significance
2	34.1635	33.7645	.3990	Ex PRIMIR D/D	NS @ .05
3	36.1622	37.5435	1.3813	PRIMIR D/D	NS @ .05*
2 & 3	34.9944	35.4942	.4998	PRIMIR D/D	NS @ .05*

COMPREHENSION

Grade	Ex PRIMIR D/D Mean Score	PRIMIR D/D Mean Score	Difference	Direction	Significance
2	31.1635	28.8654	2.2990	Ex PRIMIR D/D	NS @ .05
3	35.0626	37.2355	2.1679	PRIMIR D/D	NS @ .05*
2 & 3	32.7865	32.6965	.0900	Ex PRIMIR D/D	S @ .01*

TOTAL READING

Grade	Ex PRIMIR D/D Mean Score	PRIMIR D/D Mean Score	Difference	Direction	Significance
2	65.3269	62.6086	2.7183	Ex PRIMIR D/D	NS @ .05
3	71.1622	74.7935	3.6313	PRIMIR D/D	NS @ .05*
2 & 3	67.7528	68.1857	.4329	PRIMIR D/D	S @ .01*

*Adjusted by Analysis of Covariance.

Comparison: PRIMIR D/D Girls vs. Total Control Girls — Mean CAT Reading Scores and Direction of Growth — Table 30

VOCABULARY

Grade	PRIMIR D/D Mean Score	Control Mean Score	Difference	Direction	Significance
2	33.7645	32.2237	1.5408	PRIMIR D/D	NS @ .05*
3	37.5435	35.9512	1.5923	PRIMIR D/D	NS @ .05*
2 & 3	35.4942	33.7099	1.7843	PRIMIR D/D	NS @ .05*

COMPREHENSION

Grade	PRIMIR D/D Mean Score	Control Mean Score	Difference	Direction	Significance
2	28.8654	27.1590	1.7064	PRIMIR D/D	NS @ .05*
3	37.2355	33.4228	3.8127	PRIMIR D/D	S @ .01*
2 & 3	32.6965	29.6564	3.0401	PRIMIR D/D	NS @ .05*

TOTAL READING

Grade	PRIMIR D/D Mean Score	Control Mean Score	Difference	Direction	Significance
2	62.6086	59.3854	3.2232	PRIMIR D/D	NS @ .05*
3	74.7935	69.3333	5.4602	PRIMIR D/D	S @ .05*
2 & 3	68.1857	63.3517	4.8340	PRIMIR D/D	S @ .05*

Comparison: Ex PRIMIR D/D Girls vs. Non-PRIMIR D/D Girls — Mean CAT Reading Scores and Direction of Growth — Table 31

VOCABULARY

Grade	Ex PRIMIR D/D Mean Score	Non-PRIMIR D/D Mean Score	Difference	Direction	Significance
2	34.1635	32.2229	1.9406	Ex PRIMIR D/D	NS @ .05
3	36.1622	36.2589	.0967	Non-PRIMIR	NS @ .05
2 & 3	34.9944	34.4870	.5074	Ex PRIMIR D/D	NS @ .05

COMPREHENSION

Grade	Ex PRIMIR D/D Mean Score	Non-PRIMIR D/D Mean Score	Difference	Direction	Significance
2	31.1635	29.7134	1.4501	Ex PRIMIR D/D	NS @ .05
3	35.0676	33.9286	1.1390	Ex PRIMIR D/D	NS @ .05
2 & 3	32.7865	31.4684	1.3181	Ex PRIMIR D/D	NS @ .05

TOTAL READING

Grade	Ex PRIMIR D/D Mean Score	Non-PRIMIR D/D Mean Score	Difference	Direction	Significance
2	65.3269	62.9363	2.3906	Ex PRIMIR D/D	NS @ .05
3	71.1622	70.1875	.9747	Ex PRIMIR D/D	NS @ .05
2 & 3	67.7528	65.9554	1.7974	Ex PRIMIR D/D	NS @ .05

*Adjusted by Analysis of Covariance

Comparison: Ex PRIMIR D/D Girls vs. Non-PRIMIR Girls — Mean CAT Reading Scores and Direction of Growth — Table 32

VOCABULARY

Grade	Ex PRIMIR D/D Mean Score	Non-PRIMIR Mean Score	Difference	Direction	Significance
2	34.1635	31.4907	2.6728	Ex PRIMIR D/D	S @ .05 *
3	36.1622	35.6940	.4682	Ex PRIMIR D/D	NS @ .05
2 & 3	34.9944	33.1092	1.8852	Ex PRIMIR D/D	NS @ .05*

COMPREHENSION

Grade	Ex PRIMIR D/D Mean Score	Non-PRIMIR Mean Score	Difference	Direction	Significance
2	31.1635	25.2850	5.8785	Ex PRIMIR D/D	S @ .01*
3	35.0676	33.0000	2.0676	Ex PRIMIR D/D	NS @ .05
2 & 3	32.7865	28.2557	4.5308	Ex PRIMIR D/D	S @ .01*

TOTAL READING

Grade	Ex PRIMIR D/D Mean Score	Non-PRIMIR Mean Score	Difference	Direction	Significance
2	65.3269	56.7804	8.5465	Ex PRIMIR D/D	S @ 01*
3	71.1622	68.6194	2.5428	Ex PRIMIR D/D	NS @ .05
2 & 3	67.7528	61.3391	6.4137	Ex PRIMIR D/D	S @ .01*

Comparison: PRIMIR D/D Girls vs. Non-PRIMIR D/D Girls — Mean CAT Reading Scores and Direction of Growth — Table 33

VOCABULARY

Grade	PRIMIR D/D Mean Scores	Non-PRIMIR D/D Mean Scores	Difference	Direction	Significance
2	33.7645	33.2229	.5416	PRIMIR D/D	NS @ .05
3	37.5435	36.2589	1.2846	PRIMIR D/D	NS @ .05*
2 & 3	35.4942	34.4820	1.0072	PRIMIR D/D	S @ .05

COMPREHENSION

Grade	PRIMIR D/D Mean Scores	Non-PRIMIR D/D Mean Scores	Difference	Direction	Significance
2	28.8654	29.7134	.8480	Non-PRIMIR D/D	NS @ .05
3	37.2355	33.9286	3.3069	PRIMIR D/D	S @ .01*
2 & 3	32.6965	31.4684	1.2281	PRIMIR D/D	NS @ .05

TOTAL READING

Grade	PRIMIR D/D Mean Scores	Non-PRIMIR D/D Mean Scores	Difference	Direction	Significance
2	62.6086	62.9363	.3277	Non-PRIMIR D/D	NS @ .05
3	74.7935	70.1875	4.6060	PRIMIR D/D	S @ .01*
2 & 3	68.1857	65.9554	2.2303	PRIMIR D/D	S @ .05

*Adjusted by Analysis of Covariance

Comparison: PRIMIR D/D Girls vs. Non-PRIMIR Girls — Mean CAT Reading Scores and Direction of Growth — Table 34

VOCABULARY

Grade	PRIMIR D/D Mean Scores	Non-PRIMIR Mean Scores	Difference	Direction	Significance
2	33.7645	31.4907	2.2738	PRIMIR D/D	NS @ .05*
3	37.5435	35.6940	1.8495	PRIMIR D/D	NS @ .05*
2 & 3	35.4942	33.1092	2.3850	PRIMIR D/D	NS @ .05*

COMPREHENSION

Grade	PRIMIR D/D Mean Scores	Non-PRIMIR Mean Scores	Difference	Direction	Significance
2	28.8654	25.2850	3.5804	PRIMIR D/D	NS @ .05*
3	37.2355	33.0000	4.2355	PRIMIR D/D	NS @ .05*
2 & 3	32.6965	28.2557	4.4408	PRIMIR D/D	S @ .05*

TOTAL READING

Grade	PRIMIR D/D Mean Scores	Non-PRIMIR Mean Scores	Difference	Direction	Significance
2	62.6086	56.7804	5.8282	PRIMIR D/D	S @ .05*
3	74.7935	68.6194	6.1741	PRIMIR D/D	NS @ .05*
2 & 3	68.1857	61.3391	6.8466	PRIMIR D/D	S @ .05*

Table 35

Results of Individual Comparisons

Grade 1

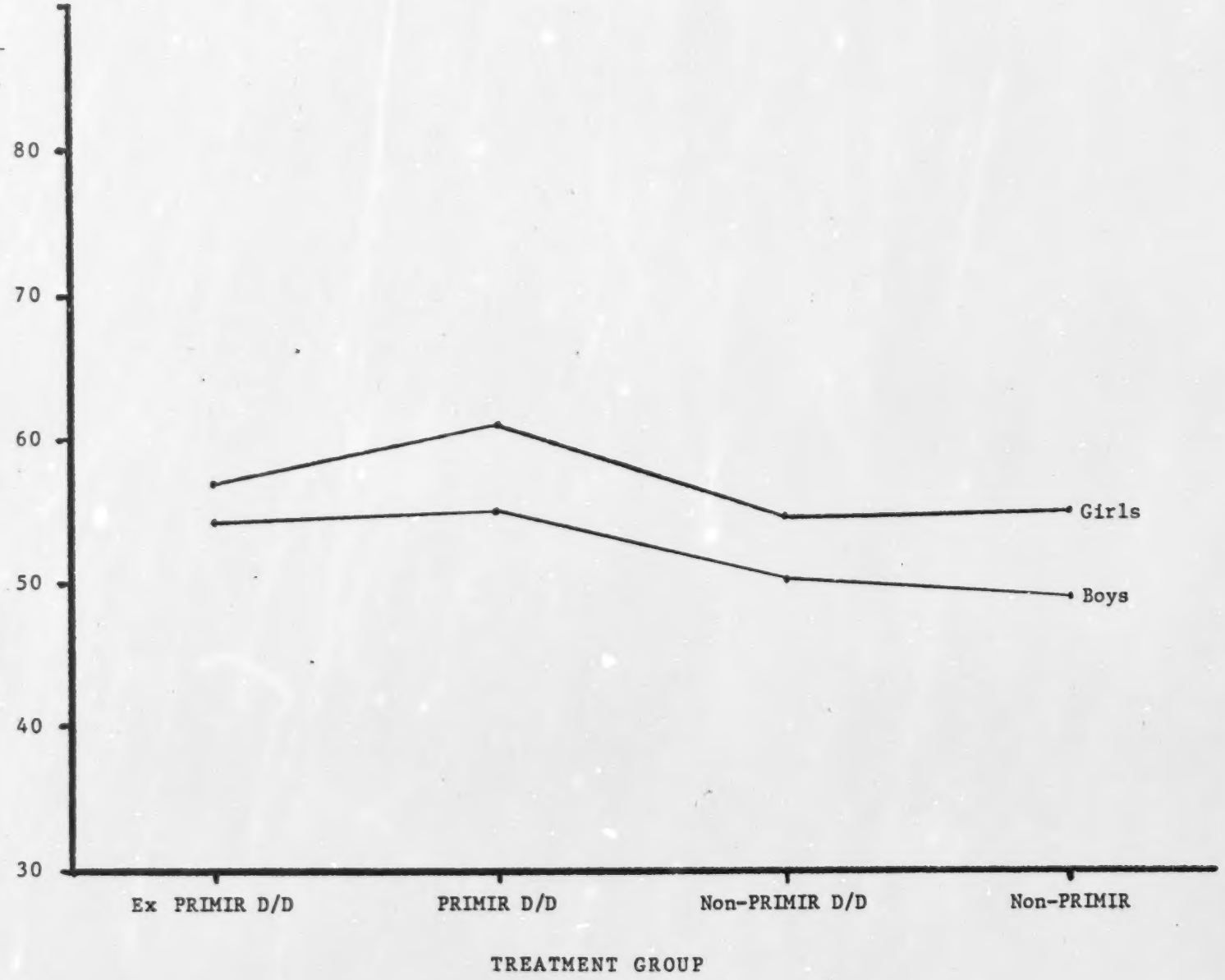
WORD KNOWLEDGE	WORD ANALYSIS	READING
Experimental > Control	Experimental > Control	Experimental > Control
PRIMIR D/D > Control (Girls only)	PRIMIR D/D > Control	Ex/PRIMIR D/D > Control (Boys only)
Ex/PRIMIR D/D > Non-PRIMIR (Boys only)	PRIMIR D/D > Non-PRIMIR D/D (Girls only)	PRIMIR D/D > Control
PRIMIR D/D > Non-PRIMIR	PRIMIR D/D > Non-PRIMIR	Ex/PRIMIR D/D > Non-PRIMIR D/D (Boys only)
		Ex/PRIMIR D/D > Non-PRIMIR (Boys only)
		PRIMIR D/D > Non-PRIMIR D/D (Girls only)
		PRIMIR D/D > Non-PRIMIR

Grades 2 & 3

GRADE	VOCABULARY	COMPREHENSION
2	Experimental > Control	Experimental > Control (Girls only)
	Ex/PRIMIR D/D > Control (Girls only)	Ex/PRIMIR D/D > Control
	PRIMIR D/D > Control (Boys only)	Ex/PRIMIR D/D > Non-PRIMIR
	Ex/PRIMIR D/D > Traditional	
	PRIMIR D/D > Traditional (Boys only)	
3		Experimental > Control (Girls only)
		PRIMIR D/D > Control (Girls only)
		PRIMIR D/D > Non-PRIMIR D/D

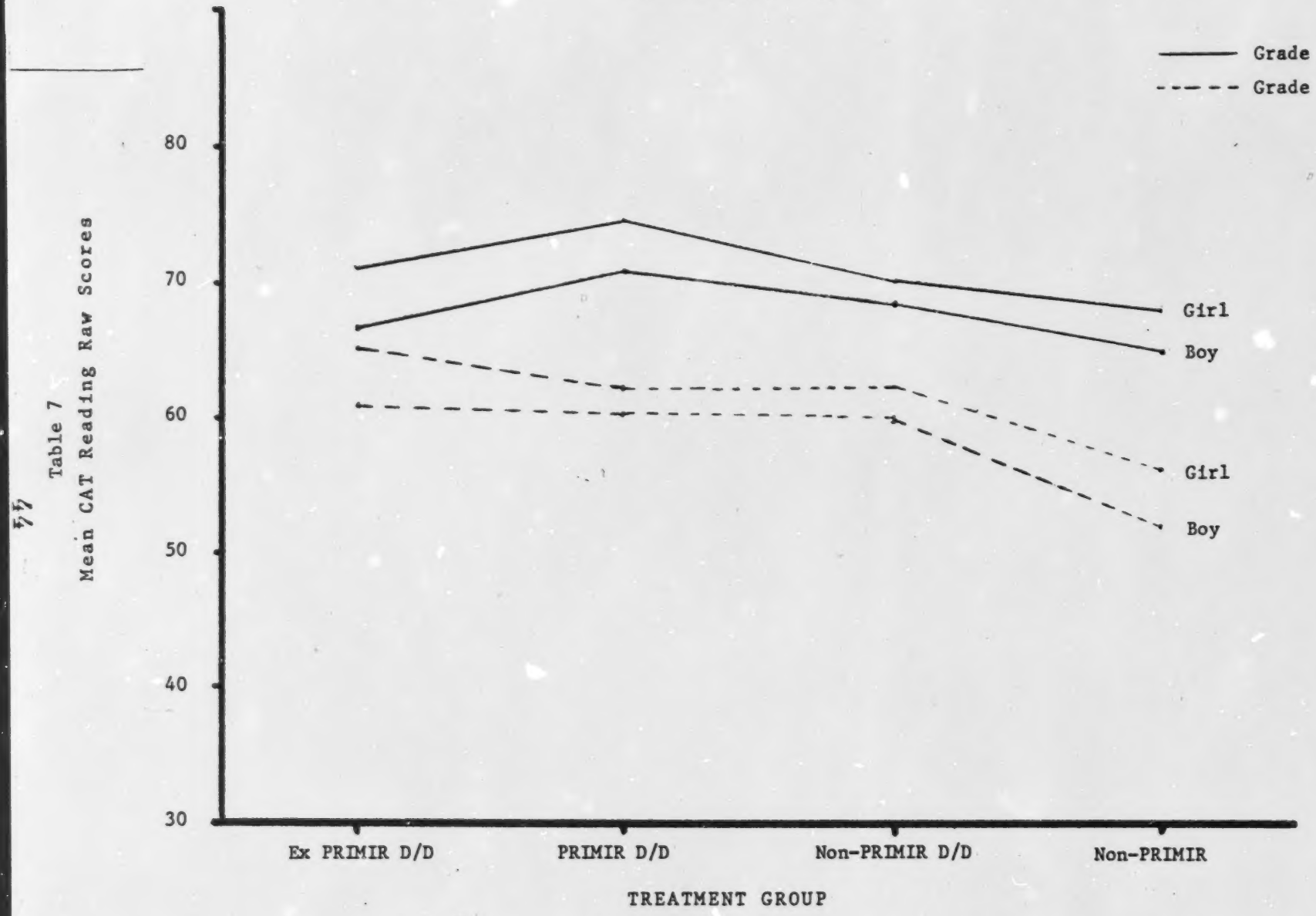
Relative Placement By
Mean MAT Total Reading Score (Raw)
For Grade 1 by Sex

Table 6
Mean MAT Reading Raw Scores



Relative Placement By
Mean CAT Total Reading Scores (Raw)
For Grades 2 & 3 by Sex

Table 37



Relative Placement By

Mean MAT or CAT Total Reading Scores (Raw)

For Each Group of Girls

Table 38

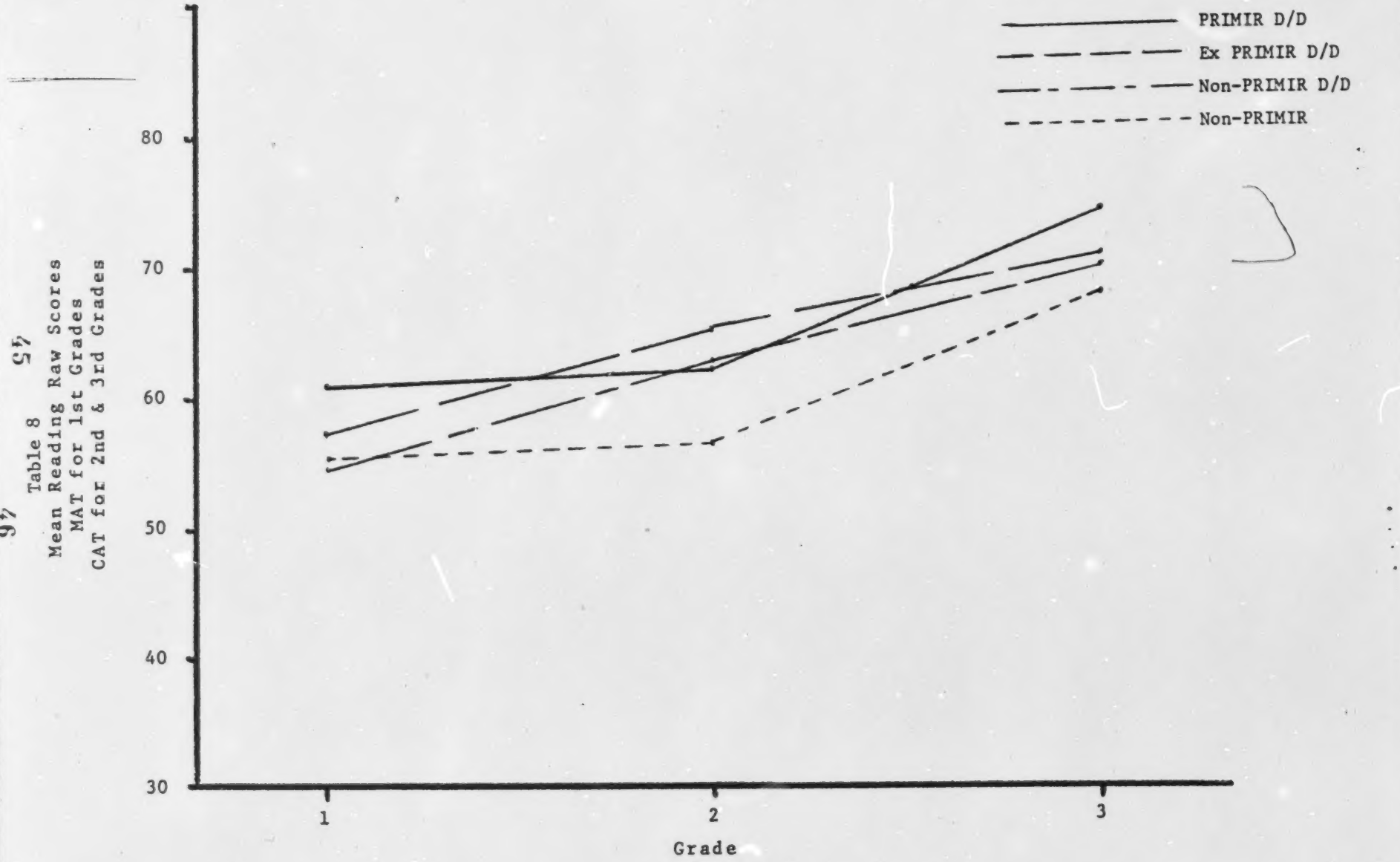


Table 8
Mean Reading Raw Scores
MAT for 1st Grades
CAT for 2nd & 3rd Grades

Relative Placement By

Mean MAT or CAT Total Reading Scores (Raw)

For Each Group of Boys

Table 39

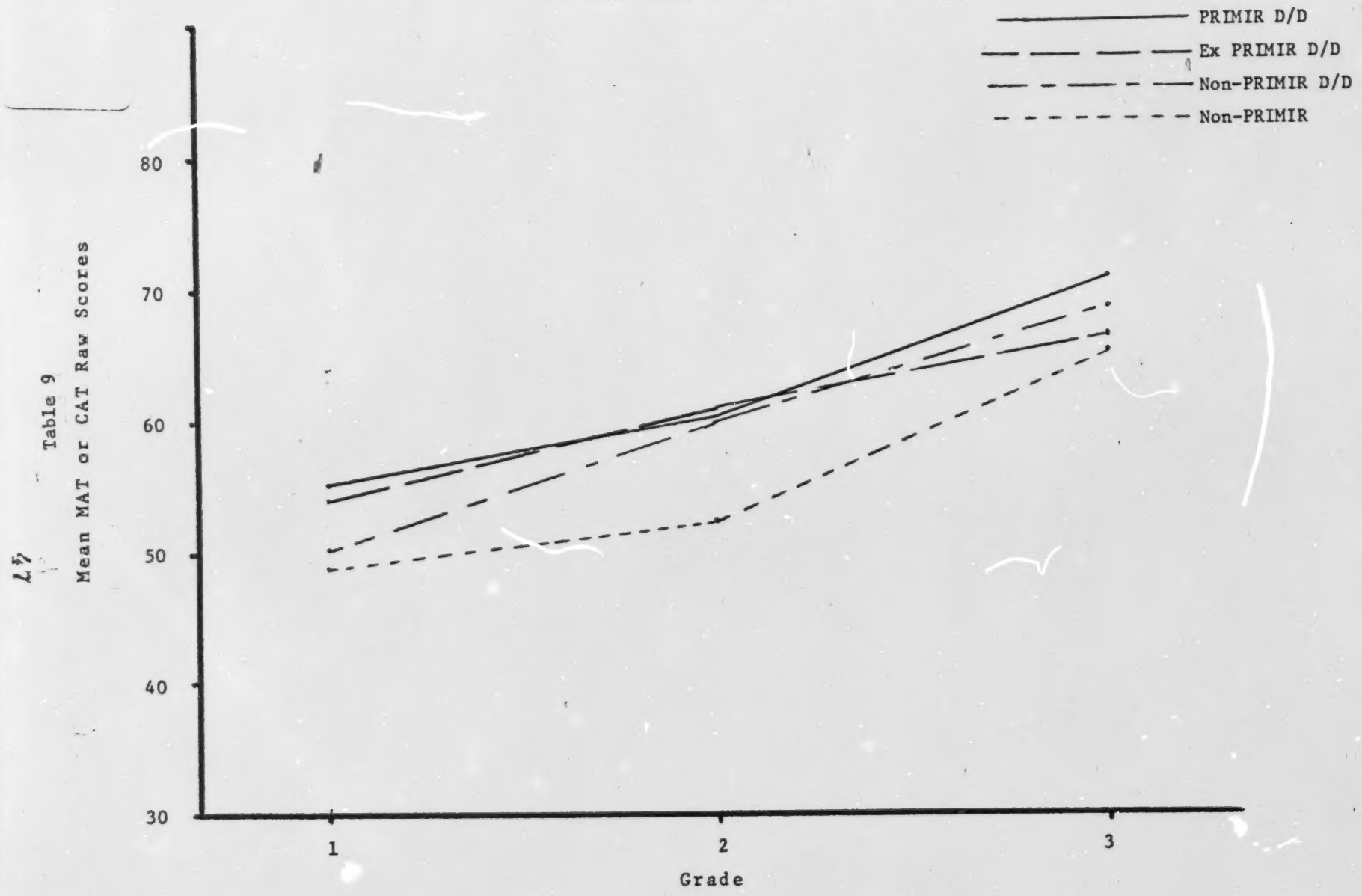


Table 9

Table 40

Dispersion Chart of Schools Using

Mean MAT or CAT Raw Scores

for each school by subgroup and grade

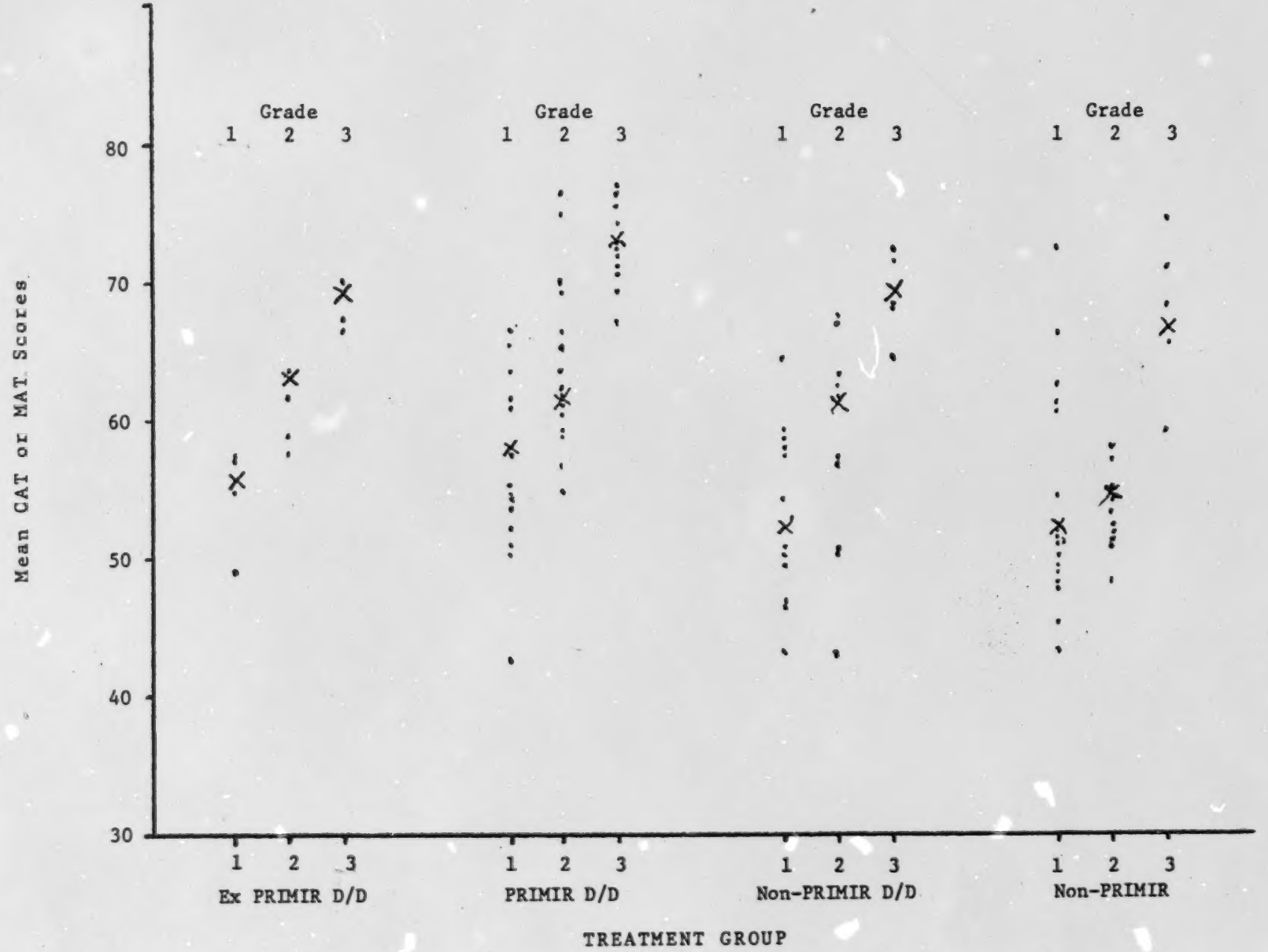


Table 41

PRIMIR DIVIDED-DAY PARENTS' SURVEY SUMMARY

1. My child is in a Divided-Day Program.

Yes	No
94.1%	5.9%

2. Has your child ever been in a traditionally scheduled reading program?

Yes	No
43.1%	56.9%

3. My child is learning to read up to his/her potential.

Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
23.6%	46.8%	20.2%	5.5%	1.2%

4. My child is learning to read better this year than in previous years.

Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
19.2%	44.9%	27.8%	7.1%	1.0%

5. I would prefer to have my child learning to read under a traditionally scheduled reading program.

Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
8.2%	10.3%	29.2%	35.6%	16.7%

6. Has the Divided-Day approach caused an at-home scheduling problem for you?

Yes	Undecided	No
24.4%	5.9%	69,7%

Question 7 was "Please make any comments that you feel are important about the Divided-Day Reading Program." Responses have been categorized for those who made written comments as shown below:

Schedule Difficulties	Expand to Other Subjects	Like Individual Attention	Other
11.5%	1.4%	21.7%	65.4%

The above listed categorized responses were further analyzed as to whether the responses were positive or negative toward the program.

Positive	Negative
77.9%	22.1%

Listed below is a random sample of the written responses.

1. "I believe without the divided day the children could never make it. It is impossible for a teacher to reach each child in a total group. So many need a one to one type teaching. I have helped in the class so I've seen and know some of the problems the children are having. These are important days for the young and if they don't understand the first grade and if the teacher can't reach the child, we as parents and teacher have missed something very important to give the child, the gift to understand and learn. Please keep the divided day."

2. "I feel each child gets more individual attention that is needed."

3. "Feel the way that Report Cards are handled for this program is too nebulous. Can't tell how our child is doing because comments are too vague."

4. "Program is flexible - gives children with problems a better chance."

5. "Because different children leave school at different times, however I believe the program is worth the effort."

6. "The child's reading efforts have certainly been improved by this system. However, it is questionable whether or not this compensates for missing an hour a day of school, which could be spent on other things. I doubt this."

7. "When visiting class for a morning I was pleased to find the teacher able to spend time with small groups and individuals. I gladly support arrangements which permit a small enough student/teacher ratio to break the traditional lock-step."